

# Future Climate from the Past

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Climate represents an average physical state of atmosphere for a long-term period, however, every year a series of unexpected extreme weather events has occurred around the world. Since the climate system is controlled by the atmosphere and surrounding ocean and lakes, snow and ice, ecosystem and land and mountains through complicated interactions, which are mainly based on the energy radiated from the sun, the earth's climate has been changed by numerous interactions and feedbacks existing in the climate system of the earth.

One of major issues is the rapid change of the earth's environment due to industrialization. A rapid climate change has been detected during the 20th century, which cannot be treated as natural phenomenon. The global average temperature was increased significantly since the 1990s. The IPCC predicted that the global temperature would increase as much as 1-3.5°C by the end of the 21st century, if we keep using the fossil fuel alike current trend. In Korea, the warm days have increased and the cold days have diminished rapidly after 1980s. The extreme days increase significant since middle of 1990s.

The climate may not be changing gradually but suddenly (Oh, 2002). Considering the frequency of occurrence of a serious of unexpected severe weather phenomena this prediction may have been realized already. At the moment we do not have enough knowledge and skill to predict the future climate yet, the monuments and ruins of the earth may give us the answer for the future climate (Oh, 2001). Now-a-days, our society is much better insulated from such catastrophic phenomena than were the societies of earlier civilizations. However, our potential vulnerability to the climate change is becoming increasingly recognized with the continuously increasing world's population. If the time of the main transition period of climate comes, we may have more violent changes than any other period we have experienced already. We have known from the past on growing possibility in the occurrence of unexpected severe weather.

## REFERENCE

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